



PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	HENRY ET AL	Examiner:	Lien Tran
Serial No.:	10/001,497	Group Art Unit:	1761
Filed:	NOVEMBER 14, 2001		
For:	FREEZER TO OVEN BISCUIT SWIRL	Docket No.	PIL0123/US

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. §1.132

Sir:

I, Leola Henry, declare and say as follows:

1. I am a citizen of the United States of America, and reside at 9359 Tewsbury Gate, Maple Grove, MN 55311.
2. I was awarded a PhD in Food Science from North Carolina State University in 1997.
3. I have held research positions relating to food technologies, specifically in dough, cereal and related food products, for 7 years. I am presently Technology Manager at General Mills in Research and Development.
3. I am a named inventor on the above-identified patent application. I have read and am thoroughly familiar with the Office Action mailed March 19, 2004, the documents cited therein, including U.S. Patent No. 5,451,417 & 6,280,782. I therefore make this Declaration in support of the patentability of claims of the application.

Preparation Procedure:

4. The following Dough formulations were prepared under my direction:

A. Biscuit Dough. An underdeveloped biscuit dough comprising flour, sugar, chemical leavening agent, salt, emulsifier, oil, protein, shortening and water was prepared. This dough formulation corresponds to a biscuit dough as used in the present invention. The dough was sheeted using a Rondo sheeter to a thickness of about 6mm, and then cut to form a dough slab measuring 15 inches x 24 inches.

B. Laminated Fully Developed Dough. A fully developed dough comprising flour, sugar, yeast (for flavor), chemical leavening agent, salt, dextrose, gluten, emulsifier, milk replacer, dried whole egg, margarine and water was prepared. This dough formulation corresponds to a conventional dough as would have been used for freezer to oven cinnamon roll products at the time of the present invention. This dough was sheeted and laminated using a Rondo sheeter. Laminated fat was rolled into the dough at 12% level. Layering was produced using manual folding process. Two folding steps were used. The first step delivered 6 layers. The second step delivered 4 layers. Total number of fat layers = $6 \times 4 = 24$. The thus laminated dough was provided in a thickness of about 6mm, and then cut to form a dough slab measuring 15 inches x 24 inches.

C. Fully Developed Dough. A fully developed dough comprising flour, sugar, yeast (for flavor), chemical leavening agent, salt, dextrose, gluten, emulsifier, milk replacer, dried whole egg, margarine and water was prepared. This dough formulation was prepared as a fully developed dough. The dough was sheeted using a Rondo sheeter to a thickness of about 6mm, and then cut to form a dough slab measuring 15 inches x 24 inches.

5. A smear layer composition was prepared comprising sugar, margarine, high fructose corn syrup, water, salt, flour, nonfat milk replacer, modified tapioca starch, and cinnamon.

6. 5 oz. Cinnamon rolls were prepared by spreading smear on each of the three dough slab types as described above at a content of about 18% on total weight basis, leaving a one inch strip open for sealing. The dough was manually curled into a roll, and cut to a target product weight of 145 +/- 18 g. These rolls were blast frozen & stored overnight at -10 F.

Bake Procedure:

7. Frozen weights were recorded for each roll prior to baking. The rolls were
- baked in a convection oven at 325 F for 23-25 minutes, until an internal temperature of 185 F was reached and the product achieved a golden brown color.

Baked Specific Volume Measurement:

8. Baked rolls were allowed to cool to room temperature. The rolls were wrapped in Saran Wrap to prevent contamination of rape seeds during measurement. Baked specific volume was measured individually for each roll using standard rape seed method. A sample size of 24 pieces was used for each dough category (A,B and C, above).

9. The average BSV for the three test product types were as follows:

A. Swirl product made from Biscuit Dough - average BSV = 2.55

B. Swirl product made from Laminated Fully Developed Dough - average BSV = 1.99

C. Swirl product made from non-laminated Fully Developed Dough - average BSV = 1.58.

10. The swirl product prepared using biscuit dough exhibits a significantly higher BSV as compared to the BSV of swirl products made using conventional laminated fully developed dough and swirl products made using conventional non-laminated fully developed dough.

11. Based on the above, it is my opinion that one of skill in the food art would have found the BSV of swirl products made from biscuit dough to be surprisingly greater than the BSV of swirl product made from conventional doughs in the FTO swirl art. It is also my opinion that the biscuit swirl product as presently claims is surprisingly advantageous for use in freezer-to-oven applications.

12. I further believe that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements are made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Date
14446

By _____
Leola Henry